

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 JUL 2005

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Applicant's or agent's file reference PD53572PC00		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA416
International application No. PCT/EP2004/004168		International filing date (day/month/year) 20.04.2004	Priority date (day/month/year) 28.04.2003	
International Patent Classification (IPC) or national classification and IPC G06F3/033				
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  11.01.2005		Date of completion of this report  25.07.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Karlis, A  Telephone No. +49 89 2399-6028		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/004168

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-10 as originally filed

**Claims, Numbers**

1-23 received on 14.01.2005 with letter of 11.01.2005

**Drawings, Sheets**

1/2-2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "*superseded*."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-27
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-27
Industrial applicability (IA)	Yes: Claims	1-27
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item V**

Reference is made to the following documents:

- D1:** US-B1-6496180
- D2:** WO-A-0128197
- D3:** JP-A-05061631
- D4:** WO-A-0156256
- D5:** EP-A-0474234
- D6:** US-A1-2002027565
- D7:** WO-A-0225903

Document D2, regarded as being the closest prior art to the subject matter of independent apparatus **claim 10**, discloses (the references in parentheses applying to this document) a device (see, e.g., figure 1a, reference sign 2) for varying the scrolling speed provided for a set of items comprising

- an information presentation unit (see figure 2a, reference sign 26) providing a set of items of information that can be scrolled by a user (see figure 11; page 14, lines 18-24),
- a user input unit, i.e., a so-called "joystick" (see figure 2a, reference sign 28), for allowing a scrolling action (see page 14, lines 18-30) and a scrolling speed variation selection (see page 15, lines 1-10) by the user and allowing actuation in a first direction, i.e., "towards the display", and in a second opposite direction, i.e., "towards the microphone" (see page 8, lines 4-12),
- a control unit (see figure 3, reference sign 44) arranged to provide the set of items of information on the information presentation unit (see figure 11) and to detect a scrolling action selection and a scrolling speed variation selection by a user via the user input unit and change the scrolling speed in dependence of the selections made by the user (see page 14, line 18-page 15, line 10).

The subject matter of claim 10 differs from the known apparatus of document D2 in that

- the scrolling speed variation is controlled by a separate user input unit and
- the controller is arranged to increase the scrolling speed when the two units are actuated in the same direction and to decrease it when they are actuated in opposite directions.

The problem to be solved by the apparatus of claim 10 may, therefore, be regarded as that

of how to provide an alternative, more efficient way of controlling the speed of scrolling.

Document D1 discloses a device (see figure 1, reference sign 11) for varying the scrolling speed in a simplified manner (see column 1, lines 29-33) by means of an input unit, i.e., a slider on the side of the device (see figure 11, reference sign 15). The further the input unit is actuated towards, resp. opposite to, the direction of scrolling the more the speed of scrolling is increased, resp. decreased (see column 3, lines 11-16). Document D1 also specifies (see column 4, lines 17-20) that the slider can be used for controlling only the speed of scrolling, while the direction of scrolling is controlled by a separate input unit, i.e., the selector switches (see figure 11, reference signs 17 and 19).

The skilled person, when confronted with the above mentioned problem, would realise that document D1 provides an efficient alternative way of controlling the scrolling speed by using two separate input units for controlling the speed and the direction of scrolling, wherein the scrolling speed is increased, resp. decreased, when the scrolling-speed controlling input unit is actuated towards, resp. opposite to, the direction of scrolling. The skilled person would, therefore, place the slider of document D1 on the side of the device of document D2, appropriately modifying its controller to provide an increase, resp. decrease, of scrolling speed when the slider and the joystick are actuated towards the same direction, resp. opposite directions, thus arriving at a device as defined in claim 10.

As a consequence, the subject-matter of claim 8 does not involve an inventive step in the sense of Article 33(3) PCT and, therefore, does not meet the criteria of Article 33(1) PCT.

At this point, it should also be mentioned that the subject matter of claim 10 also does not involve an inventive step with respect to the disclosure of document D1 when combined with the general technical knowledge of the person skilled in the art of user interfaces. Indeed, document D1 discloses two alternative positions for the slider (see column 4, lines 21-23), namely on the upper surface (see figure 1) and the side (see figure 11) of the device. Prompted by the suggestion that two separate user input units can be used (see column 4, lines 17-20), the skilled person would consider it a pure design option to use two sliders in the aforementioned positions, one for controlling the direction and the other for controlling the speed of scrolling, thus arriving at a device according to claim 10.

The same reasoning applies, *mutatis mutandis*, to the subject matter of the corresponding independent method **claim 1**, which, therefore, does not involve an inventive step (Article 33(3) PCT) either.

Dependent claims 2-9 and 11-23 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), the reasons being as follows.

Document D1 discloses the additional features of **claims 2-4 and 11-13**, i.e., simultaneous detection of scrolling action and speed variation selection (see column 3, lines 49-55), speed variation with a certain step size (implicitly, since it uses a "digital" sensor, see figure 8 and column 3, lines 17-23, wherein each detector must be assigned to a particular scrolling speed) and "linear" speed variation (as a function of the slider displacement, see column 1, lines 52-54).

The step of saving the scrolling speed setting, as described in **claims 5-9 and 14-18**, corresponds to a technique which is well known in the art (see, e.g., document D6, paragraphs [0083]-[0085]).

The use of the volume button for controlling scroll functions, as described in **claims 19 and 20**, is a design implementation, which is obvious in view of the disclosure of document D7 (see page 2, lines 1-7).

Finally, the device of document D2 is a cellular phone, as required by **claims 21-23**.

#### **Re Item VII**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.

#### **Re Item VIII**

The meaning of the expression "actuation for a [first, second opposite] direction" used in

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(SEPARATE SHEET)**

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**claim 10**, as well as that of corresponding expressions used in **claim 1**, is not clear (Article 6 PCT). In the discussion regarding Item V above, they have been interpreted as meaning "actuation in a [first, second opposite] direction", as specified on page 7, lines 4-6 and page 8, lines 12-15 of the description.

Dependent **claim 9** has been drafted as dependent on itself (Article 6 PCT).

## CLAIMS

- 5 1. Method of varying the scrolling speed provided for a set of items, wherein a first user input unit (20) allows actuation for a first direction and for a second opposite direction, and a second user input unit (16) allows actuation for the first and the second opposite directions, and comprising the steps of:  
providing a set of items of information (20, 22, 24, 26) that can be scrolled by a user, (step 32),  
10 detecting a scrolling action selection from a user by an actuation of the first input unit, (step 34),  
detecting a scrolling speed variation selection from the user by an actuation of the second user input unit, (step 38), and  
changing the scrolling speed in dependence of selections made by the user,  
15 **wherein** the step of changing comprises the further steps of  
increasing the scrolling speed if a scrolling action selection and a scrolling speed variation selection have been made for the same direction, (step 42), and  
decreasing the scrolling speed if a scrolling action selection and a scrolling speed variation selection have been made for the opposite directions, (step 44).
- 20 2. Method according to claim 1, wherein the step of changing is made based on simultaneous detection of scrolling action and scrolling speed variation.
- 25 3. Method according to claim 1 or 2, wherein the scrolling speed is varied with a certain step size and the scrolling speed is varied with said step size each time a scrolling speed variation selection is detected during detection of a scrolling action selection.
- 30 4. Method according to claim 1 or 2, wherein the scrolling speed is varied linearly when a scrolling speed variation selection is detected during detection of a scrolling action selection.
5. Method according to any previous claim, further comprising the step of saving a scrolling speed setting based on the changed scrolling speed, (step 46).
- 35 6. Method according to claim 5, wherein the step of saving is performed automatically.
7. Method according to claim 5, wherein the step of saving is performed after detecting a selection of saving scrolling speed from the user.



8. Method according to any of claims 5 - 7, wherein the step of saving is performed for said set of items.
- 5 9. Method according to claim 9, wherein the step of saving is also performed for at least one other set of items.
10. Device (10) for varying the scrolling speed provided for a set of items comprising:
- 10 an information presentation unit (14) providing a set of items of information (20, 22, 24, 26) that can be scrolled by a user,
- a first user input unit (20), for allowing a scrolling action selection by the user and allowing actuation for a first direction and for a second opposite direction,
- 15 a second user input unit (16) for allowing a scrolling speed variation selection by the user and allowing actuation for the first and the second opposite directions, and
- a control unit (28) arranged to:
- provide said set of items of information on the information presentation unit,
- 20 detect a scrolling action selection by a user via said first user input unit, detect a scrolling speed variation selection via said second user input unit, and
- change the scrolling speed in dependence of the selections made by the user,
- 25 wherein the control unit (28) provides
- a scrolling speed increase if a scrolling action selection by an actuation of the first input unit for one direction together with a scrolling speed variation selection by an actuation of the second user input unit for the same direction is detected, and
- 30 a scrolling speed decrease if a scrolling action selection by an actuation of the first input unit for one direction together with of a scrolling speed variation selection by an actuation of the second user input unit for the opposite direction is detected.
- 35 11. Device (10) according to claim 10, wherein the control unit is arranged to change the scrolling speed based on simultaneous detection of scrolling action and scrolling speed variation.

- 5
12. Device (10) according to claim 10 or 11, wherein the control unit (28) is further arranged to vary the scrolling speed with a certain step size and the scrolling speed is varied with said step size each time a scrolling speed variation selection is detected during a detection of a scrolling action selection.
13. Device (10) according to claim 10 or 11, wherein the control unit (28) is further arranged to vary the scrolling speed linearly when a scrolling speed variation selection is detected during a detection of a scrolling action selection.
- 10
14. Device (10) according to any of claims 10 - 13, further comprising a scroll speed storage (30) and wherein the control unit is further arranged to save a scrolling speed setting in the scroll speed storage based on the changed scrolling speed.
- 15
15. Device (10) according to claim 14, wherein the control unit is arranged to automatically save the scrolling speed setting.
- 20
16. Device (10) according to claim 14, wherein the control unit is arranged to save the scrolling speed setting after detecting a selection of saving scrolling speed from the user.
- 25
17. Device (10) according to any of claims 14 - 16, wherein the control unit is arranged to save the scrolling speed setting for said set of items.
- 30
18. Device (10) according to claim 17, wherein the control unit is arranged to save the scrolling speed setting for at least one other set of items.
- 35
19. Device (10) according to any of claims 10 - 18, wherein the first user input unit is provided as at least one navigation key (20) for navigating in a menu system of the device and the second user input unit is provided as at least one button (16) on the side of the device normally used for volume settings or vice versa.
20. Device (10) according to any of claims 10 - 18, wherein the first user input unit is provided as at least one button on the side of the device normally used for volume settings and the second user input unit is provided as at least one navigation key for navigating in a menu system of the device.
21. Device (10) according to any of claims 10 - 20, wherein the device is a portable electronic device.

22. Device according to claim 21, wherein the device is a portable communication device.

5      23. Device according to claim 22, wherein the device is a cellular phone.